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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/608,330

06/27/2003

Eric Gouriou

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EXAMINER

FRANCIS, MARK P

ART UNIT

PAPER NUMBER

2193

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/608,330

Applicant(s)

GOURIOU ET AL.

Examiner

Mark P. Francis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 29-30, and 32-36 is/are rejected.
- 7) ☒ Claim(s) 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This action is responsive to the application filed on June 27, 2003.
2. Claims 1-36 have been examined.

***Oath/Declaration***

3. The Office acknowledges receipt of a properly signed oath/declaration filed June 27, 2003.

**Claim Rejections - 35 USC § 101**

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-8 and 33-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1-8, Applicant defines a monitoring interface that comprises of logic of a pre-fork event that is responsive to a vfork system call, which are both software that are nonfunctional descriptive material. Applicant further defines that the pre-fork event includes indicia that identifies a child process to be created in accordance with the vfork system call, which can be implemented in software means only without the use of a computer-readable medium. Therefore, the claims as a whole recite non-functional descriptive material that can be implemented using software means only.

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With respect to claims 33, Applicant merely defines an operating system that comprises of logic of a pre-fork event that is responsive to a vfork system call, which are both software that are nonfunctional descriptive material. Applicant further defines that the pre-fork event includes indicia that identifies a child process to be created in accordance with the vfork system call, which can be implemented in software means only without the use of a computer-readable medium or any type of tangible hardware. Therefore, the claims as a whole recite non-functional descriptive material that can be implemented using software means only.

With respect to claim 35, Applicant merely defines a computer readable medium that comprises of logic of a pre-fork event that is responsive to a vfork system call, which are both software that are nonfunctional descriptive material. Applicant further defines that the pre-fork event includes indicia that identifies a child process to be created in accordance with the vfork system call, which can be implemented in software means only without the use of a computer-readable medium or any type of tangible hardware. Therefore, the claims as a whole recite non-functional descriptive material that can be implemented using software means only.

The rejection of the base claims are incorporated into their dependent claims.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

7. A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-8, 10-19, 29-30, and 32-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Bennett. (U.S. Pat 6,618,743)

**Independent claims**

With respect to claims 1, 10 and 16, Bennett discloses a method for controlling the execution of a child process created from a parent process, (Col 3:53-67, "...any child process inherits...") wherein the parent process is instrumented by a software tool, (Col 3:15-59, "...These programs are available to any ARU...") the method comprising: receiving indicia that a vfork system call will be executed by the parent process; (Col 4:60-67, "...The fork system call...vfork...") suspending execution of the parent process; (Col 5:5-30, "...the kill() and killpg() system calls...") extracting a process identifier from the indicia of the vfork system call, (Col 3:50-67, "...a process that has been opened with a particular cell\_id...", Col 4:28-50, "...Processes within each ARU operate with their own network identity...") the process identifier corresponding to a

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child process to be generated by the parent process when the parent process executes the vfork system call; (Col 5:1-25, "...involves copying the cell\_id from the parent slot...the child state is changed...")

setting a process monitor thread to observe the child process; (Col 3:53-67, "...any child process inherits...")

and resuming execution of the parent process to enable the parent process (Col 5:1-25, "...involves copying the cell\_id from the parent slot...the child state is changed...") to execute the vfork system call. (Col 4:60-67, "...The fork system call...vfork...")

With respect to claims 33 and 35, Bennett discloses a computer readable medium, comprising: logic responsive to a pre-fork event, the pre-fork event responsive to a vfork system call wherein the pre-fork event includes indicia (Col 3:50-67, "...a process that has been opened with a particular cell\_id...", Col 4:28-50, "...Processes within each ARU operate with their own network identity...") that identifies a child process to be created in accordance with the vfork system call. (Col 4:60-67, "...The fork system call...vfork...")

With respect to claim 29, Bennett discloses a method for controllably switching a target process of a process monitor thread between an instrumented parent process and a child process generated by the parent process, (Col 3:53-67, "...any child process inherits...") the method comprising:

checking whether the successful initiation of the child process can be asserted;

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when the successful initiation of the child process cannot be asserted, checking if the parent process responsible for creating the child process received indicia of a failure of a vfork system call designated to create the child process; (Col 4:60-67, "...The fork system call...vfork...")

when the indicia has not been received, waiting an amount of time before rechecking for the successful initiation of the child process; (Col 3:50-67, "...a process that has been opened with a particular cell\_id...", Col 4:28-50, "...Processes within each ARU operate with their own network identity...")

otherwise, notifying a software monitor of the unsuccessful initiation of the child process and resuming execution of the parent process; (Col 3:53-67, "...any child process inherits...")

monitoring the parent process; (Col 3:53-67, "...any child process inherits...")

otherwise, when the successful initiation of the child process can be asserted, monitoring the successfully created child process. (Col 5:1-25, "...involves copying the cell\_id from the parent slot...the child state is changed...")

#### Dependent claims

With respect to claims 2,19,34, and 36, the rejection of claims 1,16, 33, and 35 are incorporated respectively and further, Bennett discloses that indicia of the child process comprises a process identifier. (Col 3:15-63, "...Once a process is assigned a cell\_id,...")

With respect to claim 3, the rejection of claim 1 is incorporated and further, Bennett discloses that the pre-fork event is delivered to a software monitor. (e.g. See Fig. 1, element 12 and related text, Col 4:28-42, "...over a network interface...")

With respect to claim 4, the rejection of claim 3 is incorporated and further, Bennett discloses that the parent process was under run-time analysis by the software monitor. (Col 4:28-42, "...over a network interface...", e.g. See Fig. 1, element 12 and related text)

With respect to claim 5, the rejection of claim 3 is incorporated and further, Bennett discloses that the pre-fork event is delivered before the vfork system call is executed by the parent process. (Col 4:60-67, "...vfork(), is the only way to create a new process...", Col 5:5-35, "...If the executing process is not the parent...")

With respect to claim 6, the rejection of claim 3 is incorporated and further, Bennett discloses that the software monitor responds by executing the child process until completion. (Col 3:50-67, "...or use data from, another child process,...", Col 4:60-67, "...called the child process...")

With respect to claim 7, the rejection of claim 6 is incorporated and further, Bennett discloses that the software monitor responds to indicia of completion of the child



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process by resuming execution of the parent process until completion. (Col 3:53-67, "...any child process inherits...")

With respect to claim 8, the rejection of claim 7 is incorporated and further, Bennett discloses that the software monitor ensures that the first event pertaining to the parent process and received after completion of the child process is an event denoting completion of a vfork system call. (Col 3:53-67, "...any child process inherits...", Col 4:50-67, "...vfork(), is the only way to create a new process...")

With respect to claims 11, the rejection of claims 10 is incorporated and further, Bennett discloses further comprising: waiting for indicia that the child process has invoked at least one of an exec system call and an exit system call or has been terminated by an operating system; and setting a process monitor thread to observe the parent process. (Col 5:5-30, "...the system call returns,...")

With respect to claim 12, the rejection of claim 11 is incorporated and further, Bennett discloses that setting a process monitor thread comprises enabling observation of trace events generated by the parent process. (Col 3:50-67, "...Once a process is assigned a cell\_id,...")

With respect to claim 13, the rejection of claim 10 is incorporated and further, Bennett discloses that receiving indicia comprises receiving a pre-fork event. (Col 4:55-67,

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“...The fork() system call...”)

With respect to claim 14, the rejection of claim 13 is incorporated and further, Bennett discloses that the pre-fork event includes the process identifier. (Col 3:52-67, “...a process is assigned a cell\_id,...”)

With respect to claim 15, the rejection of claim 10 is incorporated and further, Bennett discloses that setting a process monitor thread comprises enabling observation of trace events generated by the child process. (Col 3:50-67, “...Once a process is assigned a cell\_id,...”)

With respect to claim 17, the rejection of claim 16 is incorporated and further, Bennett discloses further comprising: waiting for indicia that the child process has invoked at least one of an exec system call and an exit system call or has been terminated by an operating system; and resuming execution of the parent process. (Col 5:5-30, “...the system call returns,...”)

With respect to claim 18, the rejection of claim 17 is incorporated and further, Bennett discloses that waiting for indicia that the child process has terminated comprises a trace event. (Col 5:15-40, “...The kill()...”)

With respect to claim 30, the rejection of claim 29 is incorporated and further, Bennett

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discloses that the step of checking whether the successful initiation of the child process can be asserted comprises verifying the success of a trace event by using the process identifier of the child process. (Col 3:15-60, "...the processed,the owner of the process...")

With respect to claim 32, the rejection of claim 29 is incorporated and further, Bennett discloses further comprising: aborting child process monitoring when the initiation of the child process is unsuccessful. (Col 5:20-40, "...The kill() or killpg()...")

### ***Allowable Subject Matter***

9/ Claim 31 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark P. Francis whose telephone number is (571) 272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark P. Francis

Patent Examiner

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